

Appl. No. 09/801,195
Amdt. dated March , 2005
Reply of Office Action of August 23, 2004

REMARKS/ARGUMENTS

In the Office Action, requirement was made for correction of objections to claims 30 and 35; these claims are amended to overcome the grounds of objection. Claims 20-26, 28-33, and 35-38 were rejected under 35 U.S.C. 103 as being unpatentable over Emile (US 4,367,467) in view of Koike (US 5,406,399) for reasons set forth in the Office Action.

The following argument is presented to overcome the rejections, and to show the presence of allowable subject matter in the claims.

With respect to the objections raised against claim 30, there is some question as to the basis of confusion described by the Examiner. Possibly, the Examiner is of the opinion there might be a contradiction between the feature that the housing has an internal side wall and an external side wall and is constructed as a single plastic injection molded component (as claimed in claim 20). Since the feature of being a single injection molded component is explicitly described in claim 20, there should not be an impression that the housing is not a single injection molded component. Alternatively, possibly the Examiner is reading the claim language "further comprising an external sidewall (15) and an internal sidewall (20)." as

suggesting that there are more components than the single molded component. To clarify this language, claim 30 is amended to state that the "housing has an external sidewall (15) and an internal sidewall (20) for guiding the supporting element (19) in the housing".

With respect to the objections raised against claim 35, there is some question as to the basis of confusion described by the Examiner. The Examiner states that the liquid crystal cell (2) is above the first housing part (22). This statement of the Examiner is traversed respectfully because the figures and the text show that the liquid crystal cell (2) is above the walls (18) and (20) of the second housing part (23), and fits beneath the hook elements (9) and (10) which extend from external walls (17) and (15), respectively, of the first housing part (22, see specification on page 9 at lines 23-24). To overcome the objection, claim 35 is amended to state that the first housing part is provided with the first hook element and the second hook element, and that the liquid crystal cell is located between the hook elements of the first housing part and supported by the second housing part, as can be seen for example in Figure 4.

The foregoing amendments to claims 30 and 35 are believed to overcome the foregoing objections.

With respect to the rejections under 35 U.S.C. 103, the Examiner states that, in Emile, the hook elements constitute a single component with the housing (32 and 38) but that Emile does not

state that this is a single plastic injection molded component. The Examiner relies on Koike to show a frame of resin material.

It is urged that Emile does not show a housing constructed as a single component. A significant difference between the present invention and Emile is the integration of the guiding function of the contacting element in the housing. The housing according to the present invention combines therefore the functions of guiding the approximately plate shaped contacting element, and of holding the liquid crystal cell with the first hook element and the second hook element. These two features are set forth in claim 20. The great advantage of combining the guiding function and the holding function is the gain of accuracy in positioning the LCD with respect to the contacting element. The positioning is essential for the function of the LCD, especially over a lengthy period of time with exposure to strong vibrations, for example, as in the positioning of the LCD in a vehicle.

Koike does not deal with the situation of precisely contacting the LCD by use of contact elements, as is accomplished in the present invention. Koike uses an adhesive to connect the LCD to the holder or at least two holding parts (Fig. 7) holding the LCD. The layer of adhesive is fixing the LCD to the holder automatically, leading to inaccuracy in positioning the LCD relative to other components since the adhesive layer has a thickness itself. Therefore the contacting elements, which contact the LCD, must also be fixed to the LCD to guarantee the correct function. This contradicts the teaching of the present

invention, and would drive one away from combining the two references.

In Koike, the embodiment shown in Fig. 7 requires a very high degree of accuracy, since the LCD itself, a first housing part and a second housing part, must fit together and hold the LCD with acceptable clearance. Maybe a person of ordinary skill in the art would have been motivated, by combining Koike and Emile to reduce the number of pieces for an LCD holder, thereby to simplify manufacturing of a mass production device and to lower costs. But this motivation would not have led anybody to the practice of the present invention. The art also may suggest that those skilled in this art may be willing to accept the disadvantages of a higher number of pieces since no one was motivated by the teachings of the art to practice the present invention.

In order to clarify the distinction between the present invention and the teachings of the combined Emile and Koike, claim 20 is amended for improved idiomatic expression, thereby to set forth more clearly the specific components of the invention and their cooperation. Upon comparing the structure of Fig. 6 of Emile with the structure of claim 20, it is apparent that there is no way in which Emile, alone or in combination with Koike, can provide the claimed structure of a liquid crystal cell being positioned by hook elements, so as to be clamped against a contacting element that serves for providing electrical contact between the liquid crystal cell and a printed circuit board. In the invention, the printed circuit board is located at an

opposite end (the back side) of the housing from the liquid crystal cell (at the front end of the housing).

In Emile, the hook elements (clips) 72 extend along a side of the housing toward the rear of the housing to engage with the printed circuit board 36 (col. 4 at lines 30-40). Separate elements (wings 80a and 80b) engage the lens 40 of the LCD (col. 4 at lines 48-57). Therefore, forces of the clips 72 pass outside of the housing (holder) 34 to transmit force between the LCD lens and the printed circuit board. This is not the structure of the present invention in which the hook elements are part of the housing and engage the LCD, not the printed circuit board. Furthermore, the Examiner refers to the contacting elements 60 of Emile, the elements 60 being flexible elastomeric Zebra strips of conducting and insulating layers (col. 3 at line 67 to col. 4 at line 18). There is no teaching in Emile of a clamping of the strips between the LCD and the printed circuit board, and such clamping would be impossible because of the flexible nature of the Zebra strips.

It is urged that the foregoing argument overcomes the rejections under 35 U.S.C. 103 so as to provide allowable subject matter in independent claim 20 and the claims depending therefrom.

In the event there are further issues remaining the Examiner is respectfully requested to telephone attorney to reach agreement to expedite issuance of this application.

Applicants respectfully request that a timely Notice of Allowance be issued in this case.

Since the present claims set forth the present invention patentably and distinctly, and are not taught by the cited art either taken alone or in combination, this amendment is believed to place this case in condition for allowance and the Examiner is respectfully requested to reconsider the matter, enter this amendment, and to allow all of the claims in this case.

Respectfully submitted,
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CERTIFICATE OF FACSIMILE TRANSMISSION

I hereby certify that the Amendment Upon Final Rejection is being facsimile transmitted to the Patent Office on March 17, 2005.

Signed by Martin A. Farber

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